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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,623

07/19/2006

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EXAMINER

BRUNSMAN, DAVID M

ART UNIT

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1793

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,623	Applicant(s) LI, KAICHANG	
	Examiner David M. Brunzman	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060719, 20070117, 20070611, 20080612</u> . | 6) <input type="checkbox"/> Other: ____. |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-25, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3494775.

Example 6 of the reference teaches forming a soy protein composition including 10% epichlorohydrin/ethylenediamine coupling agent that acts as a latent insolubilizing agent(See column 3) and sufficient sodium hydroxide to solubilized the soy protein (see column 1, line 67). Sufficient sodium hydroxide would be expected to be of the same order as that necessary in the instant claims, i.e. 0.5-10%.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 3494775, as applied above, in view of 5374670.

Claim 6 recites that the curing agent for the protein adhesive should be the reaction product of an epoxide with a polyamidoamine or a polyamide resin. Claim 33 of US 5374670 teaches the use of such epoxide based resin in soy protein adhesives to initiate crosslinking. It would have been within the purview of the skilled artisan to

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employ the epoxide compounds because they are taught as having the same function as the amine/epichlorohydrins in 3494775.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 3494775, as applied above, in view of US 6406530.

Claims 26 requires the presence of lignin. The abstract of 6406530 teaches the addition of lignin to protein adhesive compositions improves the properties thereof. It would have been within the purview of the skilled artisan to include lignin in the composition because 6406530 teaches improved properties would be expected.

Claims 1-5, 10-12, 14-16, 19, 29, 30, 32 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3274042.

Example 1 teaches a soy protein composition comprising soy protein, water, about 1.5% sodium hydroxide and 1.5% (about 2%) on a solids basis of a nitrogen containing compound that causes the adhesive to "set" (cure) and form a water insoluble bond (Table 4) for use in hot press plywood systems.

Claims 7-9, 13, 17, 18, 20-25, 27, 28, 31, 33-38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3274042, as applied above, in view of US 3494775.

The difference between this set of claims and US 3274042 is the nitrogen containing curing agent employed. US 3494775 teaches that about 10% epichlorohydrin/ethylenediamine coupling agent acts as a latent insolubilizing agent (See column 3) in a soy protein adhesive composition. It would have been obvious to one of ordinary skill in the art to add the coupling agent of US 3494775 to the adhesive

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of US 3274042 because it would have been known to act as a latent insolubilizing agent for soy protein compositions. In that the substrate (wood) and the conditions of adhesive use for making particle type board are similar it would be expected that the skilled artisan would substitute the adhesive of 3274042 into the particle board forming process.

Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable US 3274042 in view of US 3494775, as applied above, in further view of US 6406530.

Claim 39 requires the presence of lignin. The abstract of 6406530 teaches the addition of lignin to protein adhesive compositions improves the properties thereof. It would have been within the purview of the skilled artisan to include lignin in the composition because 6406530 teaches improved properties would be expected.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 3274042, as applied above, in view of 5374670.

Claim 6 recites that the curing agent for the protein adhesive should be the reaction product of an epoxide with a polyamidoamine or a polyamide resin. Claim 33 of US 5374670 teaches the use of such epoxide based resin in soy protein adhesives to initiate crosslinking. It would have been within the purview of the skilled artisan to employ the epoxide compounds because they are taught as having the same function as the amine component of US 3274042.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, Th, F, Sa; 7:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David M Brunsman/
Primary Examiner, Art Unit 1793

DMB